



SUBSTITUTE SPECIFICATION
REPROGRAMMABLE OPTICAL READER

Cross References to Related Applications

[0001] This is a divisional of U.S. Patent Application No. 09/385,597 filed on August 30, 1999, which is a continuation-in-part of U.S. Patent Application No. 08/839,020 filed April 23, 1997, which issued as U. S. Patent No. 5,965,863, which, in turn, is a continuation-in-part of U.S. Patent Application No. 08/697,913, filed September 3, 1996, which issued as U.S. Patent No. 5,900,613 on May 4, 1999, the contents of which are relied upon and incorporated herein by reference in its entirety, and the benefit of priority under 35 U.S.C. §120 is hereby claimed.

Background of the Invention

Field of the Invention

[0002] The present invention relates to hand held optical reading devices, and is directed more particularly to a hand held optical reading device configured to be programmed with use of a host processor.

Description of the Prior Art

[0003] One-dimensional optical bar code readers are well known in the art. Examples of such readers include readers of the SCANTEAM® 3000 Series manufactured by Welch Allyn, Inc. Such readers include processing circuits that are able to read one-dimensional (1D) linear bar code symbologies, such as the UPC/EAN code, Code 39, etc., that are widely used in supermarkets. Such 1D linear symbologies are characterized by data that is encoded along a single axis, in the widths of bars and spaces, so that such symbols can be read from a single scan along that axis, provided that the symbol is imaged with a sufficiently high resolution along that axis.

[0004] In order to allow the encoding of larger amounts of data in a single bar code symbol, a number of 1D stacked bar code symbologies have been developed, including Code 49, as described in U.S. Patent No. 4,794,239 (Allais), and PDF417, as described in U.S. Patent No. 5,340,786 (Pavlidis, et al). Stacked symbols partition the encoded data into multiple rows, each including a respective 1D bar code pattern, all or most all of which must